

REMARKS

In view of the foregoing amendments and following remarks responsive to the final Office Action dated April 27, 2006, the Advisory Action dated Jul 17, 2006 and the telephonic interview with the Examiner held August 24, 2006, Applicant respectfully requests favorable reconsideration of this application.

Interview

Applicant respectfully thanks the Examiner and his Primary for their courtesy in conducting a telephonic interview with Applicant's undersigned representative on August 24, 2006. The parties discussed the two issues set forth in Applicant's proposed agenda for the interview. The interview was successful in that the parties arrived at avenues for proceeding in connection with both of those issues.

The first issue was the non-enablement rejection asserting that the claims are not enabled because it was not understood how application logic, which is a method, can be embodied in a computer readable medium. The parties did not reach agreement as to the propriety of the rejection. Nevertheless, the parties agreed that expressly reciting in the claims that the "Web services" are "software modules" seemed to render the issue moot.

Applicant has herein amended the claims accordingly.

The second issue concerned whether Applicant's amendments to the independent claims further defining Web services as "software modules that can be exchanged between nodes of the network and run at said nodes" was sufficient to prevent the Office from reading "Web services" (now "Web services software modules") on any software in a network and, particularly, on the data that is exchanged between nodes of a network in the Zintel reference.

During the interview, the Examiner indicated that, based on his cursory review during the interview, it appeared that Zintel did not disclose exchanging of software modules between nodes but that it would be necessary to take another look at the Zintel reference to confirm.

Below is a discussion responding to all of the bases of rejection asserted in the final Office Action and further including commentary concerning the advisory Action and the aforementioned telephonic interview. Accordingly, much of the text below is a copy of the text contained in the original response to the final Office Action in this case; however, much of it also is new.

Responses to Objections and Rejections as to Claim Form

Hyperlink

In section 12 of the Office Action, the Office objected to the specification because it contains "an embedded hyperlink and/or other form of browser-executable code". In response to this same objection contained in the previous Office Action, Applicant amended the specification so as to make the hyperlink not browser-executable. In section 3 of the Response to Arguments section of the present Office Action, the Office indicated that "Adding spaces to the text of the hyperlink to allegedly make it not browser-executable does not solve this issue. The hyperlink should be removed from the specification".

Applicant respectfully traverses. MPEP section 608.01 explains:

Examiners must review patent applications to make certain that hyperlinks and other forms of browser-executable code, especially commercial site URLs, are not included in a patent application. >37 CFR 1.57(d) states that an incorporation by reference by hyperlink or other form of browser executable code is not permitted.< Examples of a hyperlink or a browser-executable code are a URL placed between these symbols "< >" and http:// followed by a URL address. When a patent application with embedded hyperlinks and/or other forms of browser-executable code issues as a patent (or is published as a patent application publication) and the patent document is placed on the USPTO web page, when the patent document is retrieved and viewed via a web browser, the URL is interpreted as a valid HTML code and it becomes a live web link. When a user clicks on the link with a mouse, the user will be transferred to another web page identified by the URL, if it exists, which could be a commercial web site. USPTO policy does not permit the USPTO to link to any commercial sites since the USPTO exercises no control over the organization, views or accuracy of the information contained on these outside sites.

Accordingly, the issue with respect to hyperlinks in specifications is, in fact, whether or not they are browser-executable. The very statement in the Office Action that "the disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code" itself clearly indicates that the hyperlink must be browser executable in order to be objectionable. Specifically, it expressly uses the term "other form of browser-executable code", thus explicitly indicating that the term "embedded hyperlink" in the statement is, by definition, browser-executable code. Accordingly, adding spaces to make the phrase not browser-executable, by definition, makes it not objectionable. Applicant has herein further amended this paragraph to eliminate "http://" from the term, thus further assuring that it cannot be executed by a browser.

Furthermore, Applicant's counsel has performed a search for U.S. Patents containing the string "WWW." on the USPTO Website search facility, and found over 9,000 patents containing that string. In every one of the handful of instances that Applicant's counsel personally checked, the "WWW." string was part of a non-executable URL.

Applicant respectfully requests Office to withdraw this objection.

Non-Enablement Rejection

In section 14 of the Office Action, the Office rejected claims 1-25 under 35 U.S.C. 112, first paragraph as non-enabled. This rejection also was held over from the previous Office Action. The Office asserts that the claims recite a computer program product, but also recite that the computer program product is in the form of a Web service and that a Web service is a method that can be performed over the World Wide Web. During the interview, the Examiners explained that page 3 of the present specification describes that a Web service could be a software module or application logic. The Examiners explained that application logic could, for instance, be a flowchart, which could not be embodied on a computer readable medium, and that this was the basis of the non-enablement rejection.

While applicant strongly disagrees with the Office's assessment of the law in this regard, it was agreed that changing the language to refer to Web services as software modules appeared to make this rejection moot and was agreeable to both sides.

Indefiniteness Rejections

In section 17 of the Office Action, the Office rejected claims 1, 12, 15-19, 23, 25, and 38 as indefinite under 35 U.S.C. 112, second paragraph, because it is unclear what Applicant means by "causing the dynamic reconfiguration of Web services based on said messages and said Web services available at said corresponding network node". The Office asserted that the language is confusing because it is unclear (a) if the messages are at the corresponding network node, (b) the Web services are active at the corresponding network node, (c) the Web service can be downloaded at the corresponding network node, or (d) if the messages are local. Further, the Office asserted that (e) no standard was given in the specification for the dynamic reconfiguration of a Web service. This rejection also was held over from the previous Office Action.

In the Advisory Action of July 17, 2006, the Office indicated that Applicant's proposed amendments overcame the indefiniteness rejections. Applicant has herein included all of those same amendments. Accordingly, this rejection should be overcome in accordance with the indication in the Advisory Action.

Responses to Prior Art Rejections

Independent Claims

The Office has rejected claims 1-4, 7-9, 11-14, 22-23, 25-28, 31-33, 35-38, and 46-47 as anticipated by Zintel. The Office further rejected claims 5 and 29 as obvious over Zintel in view of Christensen; claims 6 and 30 as obvious over Zintel in view of Christensen and further in view of Januszewski; claims 10 and 34 as obvious over Zintel in view of project JXTA; claims 15-21 and 39-45 as obvious over Zintel in view of Jindal; and claims 24 and 48 as obvious over Zintel.

Applicant will herein focus on the Office's comments in the Response to Arguments section of the final Office Action, on the advisory Action, and on the telephonic interview.

The primary issue in dispute is what is meant by the term "Web services". Specifically, the Office asserted that Applicant's definition of Web service is found on page 3 of the specification, namely:

Web services is a term applied to application logic or application software modules that can be exposed to and shared with others over the Internet via a standardized interface mechanism.

The Office asserted that:

Applicant's express definition of Web services is equivalent to Zintel's definition of a service in Column 9, lines 1-12, which disclosed processes such as a clock available on devices in Zintel which were accessed over the Web (column 1, line 35). The capabilities of the device (column 2, lines 1-4) were Web services since they were performed over a network or the Web. See further column 4, lines 57-67. Furthermore Applicants "express definition" of Web services could be legitimately read as any software used in connection with a network.

Applicant respectfully traverses. The Office is neglecting parts of the specification that clearly refine the definition of "Web services". For instance, the three sentences following the sentence quoted above by the Office state:

The standard paradigm on the Web is based on the exchange of files containing displayable information, e.g., web pages. Thus, the Web services concept can be considered an extension of this paradigm to automated exchange of software modules between nodes of the network, i.e., machine-to-machine, or business-to-business interfaces. Furthermore, the receiving node can automatically set up and run the software without human intervention.

Furthermore, Applicant has amended the claim language to define Web services as "executable software modules that can be exchanged between nodes of a network and run at said nodes". Thus, Applicant's express definition of Web services cannot legitimately be read on any software used on a network, but is limited to executable software modules that can be exchanged between nodes of a network and that can be run at the receiving node.

Particularly, Zintel simply refers to "Services" and expressly defines that term in column 9, lines 1-12 as follows:

Service. The fundamental UPnP control entity (but not the finest level of control). An example of a Service is "Clock". Services are defined with a mandatory common base set of functionality. Vendors can extend base functionality with proprietary extensions provided the base functionality is implemented. Service definitions are versioned and later versions are constrained to be supersets of previous versions. UPnP enables searches for all Devices that contain a specified Service of a minimum version. This search would find all clocks, regardless of their packaging. The search for Device Type "Clock" would be used to find only stand-alone clocks.

Accordingly, Zintel's "Services" are not the same thing as the present invention's "Web services".

The Office was reading "Web service" to cover at least any software on a node of a network that can be accessed and used by another node on the network.

This definition is not warranted by the claim language, especially the newly amended claim language. Specifically, the language of reconfiguring the Web services available at a node used in claim 1, for instance, cannot reasonably be read on merely exchanging information about software. It inherently means configuring the software itself and not just accessing and using it. Applicant has, nevertheless, amended independent claims 1 and 25 to expressly recite that the reconfiguring includes exchanging software modules between containers.

The UPnP networking and SSDP disclosed in columns 57 and 58 of Zintel referred to by the Office does not concern the exchanging of software modules. Rather, it simply refers to the exchange of information about software.

During the telephonic interview, the Examiner indicated that the proposed amended claim language appeared to distinguish over Zintel based on his cursory review during the interview. Applicant respectfully requests the Examiner to complete his more thorough review of Zintel, which Applicant believes will confirm that this is, in fact, the case.

Further Distinctions of Dependent Claims

With respect to dependent claims 2 and 26, the distinctions are even clearer. Claim 2 depends from claim 1 and adds that the instructions for causing the dynamic reconfiguration of Web services comprises instructions for transmitting messages "requesting said other containers to return copies of Web services software" and instructions, responsive to receipt of those requests "for sending copies of said requested Web services software to sit requesting containers". In the Final Office Action, the Office asserted that this claim language reads on Zintel's disclosure of sending messages requesting the UPnP description of a device's services and their parameters and controls and the return of such information to the requester reads on this language. However, it clearly does not. Requesting and receiving information about a software module is totally different than requesting and receiving the module itself.

The Office attempted to get around this by asserting that "the XML syntax of the description is Web services software". Accordingly, with respect to claim 2, the Office went even further than it did in connection with claim 1 and asserted that Web services, not only includes any software available on a network that can be accessed and used by another node, but also encompasses simple XML syntax contained in a message between two nodes. This definition is particularly inappropriate as it seems to (1) have no connection whatsoever to any definition in Zintel of "Service" (2) have no rational relationship to the ordinary and usual meaning of the word "service", and (3) have no rational relationship to Applicant's express definition or use of the term "Web services" in the specification.

Nevertheless, the proposed amendment defining Web services as executable software modules should make the rejection moot.

Claim 26 depends from claim 25 and is similar in scope to claim 2. Accordingly, these two claims even further distinguish over the prior art of record.

Dependent claims 4 and 28 recite the feature whereby the containers perform their discovery by querying a Web services registry. The Office asserted that Zintel's

contacting of the UPnP template to find out the UPnP description for a device as discussed in column 58, lines 35-65 meets this limitation.

Again, the Office simply was not giving the claim term “web services registry” a rational interpretation. Zintel's UPnP templates are associated with the particular node to which they correspond. In fact, the UPnP template appears to be what the Office considers (erroneously) to correspond to the claimed “containers”. Thus, the Office is recharacterizing the very same template that it needs to rely on as constituting the “container” as a Web services registry. This is especially improper here where Applicant has bent over backwards to make clear that this claim recites an alternative to discovery via querying containers. Specifically, the specification discusses four different ways to discover Web services information, including (1) peer-to-peer inquiry, i.e., two containers directly communicating with each other, and (2) querying of a Web services registry. See page 11, line 8 through page 12, line 3. Thus, Applicant's specification clearly describes that the claimed Web services registry is not the claimed container.

Even further, Web services registries are well known in the field and no one skilled in these arts would consider Zintel's template to be a Web services registry. If this is not enough, Applicant has clearly set forth what it means by “Web service registry” by referring to specific examples of available Web services directories. See page 4, lines 4-11 of the specification, where it states:

The UDDI initiative is an XML-based registry standard by which businesses list themselves and the Web services they offer on the Internet. WSDL is one approach to describing such Web services. A key goal of the UDDI initiative is to enable companies to find each other and each other's Web services on the Internet and to make their computer systems inter-operable with each other in order to facilitate electronic commerce. The UDDI initiative allows businesses to list information about themselves, e.g., name, location, and/or the Web services they offer.

There is no rational interpretation of the term “Web services registry” that covers Zintel's template, especially when the Office already is using the template as the very

“container” that this claim language is intended to distinguish from. Thus, this rejection is improper and should be withdrawn.

Dependent claims 5 and 29 recite that the messages are in WSDL. The Office asserted that this is taught in secondary reference Christensen and that it is obvious to combine Christensen with Zintel because Zintel uses XML to describe network services and Christensen teaches a format that is a known XML format variant for describing network services.

This is an improper combination of references. WSDL is an acronym for Web Services Descriptor Language. WSDL is a language developed for use in connection with Web services. The concept of using WSDL in connection with Zintel's registering of nodes on the network, which has nothing to do with Web services, makes no sense. WSDL is designed for an entirely different purpose.

Furthermore, the Office rejected dependent claims 6 and 30 as being unpatentable over Zintel, Christensen and Januszewski, noting that Januszewski discusses UDDI. However, once again, the combination is improper and this rejection further highlights the fact that the Office is over broadly interpreting Applicant's claim language. First of all, Januszewski is an unnecessary reference since the Office has cited Januszewski solely to show that UDDI is a known Web services registry, which Applicant admitted in the present specification. Nevertheless, the proposed combination is improper because, in this combination, the Office is saying that Zintel's template can be the UDDI registry. The UDDI registry is a web site (www.uddi.org) at which businesses register their Web services and make them available to others. The assertion that Zintel's template is the website www.uddi.org is pure nonsense.

Conclusion

In view of the foregoing amendments and remarks, this application is now in condition for allowance. Applicant respectfully requests the Examiner to issue a Notice of Allowance at the earliest possible date. The Examiner is invited to contact Applicant's undersigned counsel by telephone call in order to further the prosecution of this case in any way.

Respectfully submitted,

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